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ABSTRACT

Both aural-oral practice with the sounds of English and formal rules are important in pronunciation instruction, and have a role to play in interlanguage development. Formal rules provide self-evaluation for purposes of self-correction, a process which allows learners to judge or self-correct their own utterances against rule-generated predictions in order to get intimately familiar with the sound patterns of oral English. While teachers are not directly involved in this process, it may be one of the greatest contributions teachers can make to students' language acquisition success, for students will know how to teach themselves, in and out of class, with learned phonological rules. (MSE)

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The Role of Formal Rules in Pronunciation Instruction[1]

Wayne B. Dickerson

INTRODUCTION

In simple terms, we can describe the phonological system of English as consisting of elements and rules. The elements are the vowel and consonant sounds, the stress and pitch levels. The rules tell how the elements are organized in words, phrases and sentences. Whether they are native or nonnative users of English, all speakers must control both aspects of the phonological system reasonably well to communicate orally. For this reason, the goal of ESL pronunciation classes should be to help learners master English phonology—its elements and its rules.

This goal contrasts with reality. When we visit pronunciation classes, we typically find them rich in the elements of the system but poor in the rules of the system. That is, students learn a lot about how to articulate and discriminate vowels, consonants, stresses and intonations. But they do not learn much about when to use these elements in words, phrases and sentences. Learners are often left asking questions like these: I can make a primary stress, but where in a phrase does the primary stress go? I can produce a rising intonation, but when is a rising intonation the one to use? I can pronounce long, short and reduced vowels, but which vowels in a word are long, short and reduced? The answers to these questions are the rules of the phonology, most of which never reach the student.

The lopsided character of most pronunciation classes, with their near-total emphasis on phonological elements and their near-total neglect of phonological rules, made us wonder how we could bring the two types of content into proper balance. We grant the importance of oral-aural work on the elements. We must continue to help our students improve their speaking and listening accuracy. But we also recognize the equal importance of the organizing rules. So, somehow we should

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help our students master the rules that govern the elements they are learning to say and hear.

One approach to rule-learning is direct. We can state the approach in the analytical terms of current research. Since the phonological system of the target language consists of rules, and the phonological system of the learner's interlanguage consists of rules that are evolving in the direction of the target language, why not try to influence the evolution of the interlanguage phonology by giving learners explicit rules from the target language phonology? However, it was not this theoretical question as much as practical considerations that originally encouraged us to explore seriously the direct approach to rule learning. At this point, let us review some of these considerations. Later, we will return to a discussion of theoretical matters.

Some of the motivations underlying our work are relevant to many different language learning situations; other motivations are perhaps more unique to a university setting.

First, errors of prediction. Placement test results assign students to our pronunciation course because of serious errors in pronunciation. But when we examined the test results more closely, we found that a large portion of the errors arose, not because the learners did not know how to articulate sounds, but because they did not use their articulations properly in words. For example, we would hear students pronounce correctly the vowel sound in monosyllabic words like *clay*, *snake*, but mispronounce the same vowel in polysyllabic words like *flagrant*, *radial*. Their pronunciation error was not an articulation error but a prediction error; they simply did not know that *flagrant* and *radial* require the same vowel as in *clay*. It seemed that one solution to this problem would be to teach students the rules that predict vowel sounds in polysyllabic words.

Second, the limits of exposure. Our university ESL classes are full of students who have had years of contact with English. Ten to fifteen years of study is not uncommon. Despite their extensive exposure to English, they have not assimilated a sufficiently good *feel* for English phonological patterns to extend their skill into new domains. For example, they may know that *cute* and *fewest* have a /y/ between the first consonant and the first vowel, but they have not picked up the simple cues that would enable them to pronounce *putrid* and *puniest* with /y/. More exposure seemed unlikely to improve their abilities. However, if they were given a few strategic guidelines, it might solve their problem, not only for these words but for the rest of the English lexicon requiring the unwritten /y/.

Third, a substitute for intuition. Based on placement test scores, students at our university are required to take only one remedial pronunciation course—three hours per week for fifteen weeks. In this length of time, we can help most students with most of their articulation problems. But in so short a time, we cannot instill in them a sensitive intuition about English sound patterns. Without some guidance, they still would not know when to use their newly improved articulations. They would still not know how to help themselves tackle the pronunciation of vocabulary that was new to them. It seemed that they needed a handy substitute for the guidance of a well-formed intuition, a substitute that would enable them to make native-like decisions while their interlanguage intuition developed at its own pace. In one semester, we could give them most of the major rules they would need for word and phrase stress, for intonation patterns and for vowel and consonant choice.

Fourth, the demand of their fields. At our university, as at other educational and research institutions, students face a constant bombardment of new vocabulary

from their respective fields of specialization. Furthermore, they are frequently put in a position of needing to manage that vocabulary in oral performance for class presentations, for asking and responding to questions, for teaching classes, for discussing in seminars, for talking with fellow students and with teachers, and later for presenting conference papers and interacting with English-speaking colleagues. The general learner-vocabulary of ESL classes does not meet their specific needs. However, it seemed to us that learners could meet their own demands for oral English if they had a personal resource to fall back on, namely, rules to guide their use of sounds, rhythm and melody.

Fifth, the background of learners. We deal with well-educated adult language learners, many of them in the sciences and many accustomed to learning and applying rules in their own fields. For these students, there is nothing novel in the notion that language rules can be used to make pronunciation predictions. This student population, then, has the ideal academic background and experience for explicit rule-use. These factors favored the direct use of language rules in pronunciation class.

Finally, the nature of remedial classes. Students come to our pronunciation class, not as novices in the language, but as long-time learners with specific problems. Unlike students new to English for whom large portions of English phonology must be covered, students in our classes usually have fewer than a dozen major weak areas. In these circumstances, we have the time to commit as much as fifty percent of our class hour to rule-learning and rule-using work.

For these various practical reasons, then, we felt it was worth the risk to redesign our oral-aural pronunciation classes to accommodate a rule component. Now, one-half of our in-class time is devoted to articulation and discrimination work—the traditional emphasis (Robinett 1978:64-109). The other half is spent using rule-generated predictions as a way to correct pronunciation. That is, students learn to predict the consonants, vowels and stress of words, the rhythm of phrases and the intonation patterns of sentences, and to put these predictions to work in self-monitoring—a somewhat nontraditional emphasis (Dickerson 1975).

This paper reports on what we have learned after five years of research, writing and testing in the area of using formal rules in pronunciation teaching and learning. The report begins with an orientation to our instruction by answering two questions: What do our materials look like in general? What do pronunciation rules look like in particular? Next, we consider the process by which formal rules make an impact on speech. In this section, we define carefully what we want students ultimately to learn from the rules they study. In the following section, we turn to the problem of what we can do to promote the learning we want. We identify the role of classroom instruction and discuss specific teaching techniques that help students learn. Finally, we return to the theoretical issue raised earlier. Specifically, we consider the experiences reported here in the light of the Monitor Model of language learning (Krashen 1981).

TEACHING RULES: LESSON FORMAT AND CONTENT

Our oral-aural work in class is like that found in most pronunciation classes. We deal with the vowel and consonant articulations needed by members of a particular class. Our exercises, however, move quickly to meaningful communication thereby allowing us to integrate rhythm and intonation practice into every vowel and consonant lesson (Dickerson and Dickerson, a and b).

Our rule-oriented work, however, is not typical of pronunciation instruction.

For instance, our textbooks on word-level rules contain lessons each of which has four parts, as depicted in (1) (Dickerson, forthcoming b). During class, the teacher tells the students generally what the new lesson will be about. This is a five-minute Preview—Part 1. Students are then assigned a Discovery Homework—Part 2. This is a set of pencil-and-paper exercises they do at home to learn and to practice using the rules with a given set of words. When they return to class, they do the Oral Work—Part 3. This part of the lesson gives students oral practice with the words they have been studying and also integrates the words into utterances where rhythm and intonation come into play. Finally, they do a brief Review at home—Part 4—to recapitulate the principal points of the lesson.

(1)	Part 1	Part 2	Part 3	Part 4
	Preview	Discovery Homework	Oral Work	Review
	In Class	Out of Class	In Class	Out of Class

A typical four-part lesson presents rules and practice materials focused on a particular set of words, such as *-ous* adjectives, *-ize* verbs or *-er* nouns. We can illustrate some of the rules by looking at the lesson that deals with final *-y* nouns, such as those in (2).[2] This lesson appears late in the semester.

(2) melody majesty apology stupidity

The rules that apply to the final *-y* noun set predict stress and vowels. In general, our ESL stress rules assign stress to words with reference to a syllable we call the Key Syllable. For the *-y* noun class, the learner finds the Key immediately left of the *-y*, as underlined in the examples of (2). The syllable left of the Key is referred to as the Left Syllable. It is identified with a wavy line. The rule states simply that for this class of words, the primary stress falls on the Left Syllable, e.g. ***mélody***, ***májesty***, etc. For learners, this rule is new information.

To make vowel predictions, learners use three pieces of old information encountered in earlier lessons. The first is that if the stressed Left Syllable is spelled with a single vowel letter followed by a single consonant letter—VC, the vowel will be short (Dickerson 1980). Note the Short E in ***mélody***, the Short A in ***májesty***, etc. Second, if the Key does not carry the primary stress, it is unstressed and pronounced with a reduced vowel, /ə/. Finally, the learner knows that a final unstressed *-y* is pronounced as Long E /ē/.[3] These stress and vowel prediction rules are summarized in (3).

[2]Excluded from the final *-y* noun set are nouns ending in *-acy*, *-ancy*, *-ency*, *-ary*, *-ery*, *-ory*, each of which represents a different set of words.

[3]Kenyon and Knott (1955) note that the sound of the final, unstressed *-y* varies from /i/ (*bit*) to /ē/ (*bee*) in American English (xvii). The /ē/ variant is commonest in the North and East (481). We have chosen to use the /ē/ variant here because it is the form used in the rules and derivations of Chomsky and Halle (1968:74). However, the /i/ pronunciation of *-y* is widely used in educated English and must be accepted as correct in the learner's speech (Dickerson 1977).

(3) Rules for final -y nouns with Left Syllables
Stress: Stress the Left Syllable.
Vowels: a. A stressed VC in the Left Syllable is short.
b. An unstressed Key vowel is reduced.
c. A final unstressed -y is Long E.

After learners have done rule-prompted pronunciation work, do they speak more accurately? The answer is, Yes. When we measure student performance with a pretest and a posttest three months apart, we find that the spontaneous speech of these students has improved in accuracy in those areas where we have provided rule-oriented instruction. Not only have we seen marked improvement, but we have also been able to determine the kind of rule use that produces the greatest improvement. In a recent study investigating the effectiveness of rules used before and after speaking (Dickerson, forthcoming a), we pretested four groups of students, each group representing a different language background. The test covered all of the word-level prediction topics—word stress, vowels, consonants—to be covered during our semester-long pronunciation course. The posttest showed not only that the performance of each group improved after one semester of prediction work. But it also showed that each group improved significantly more when the subjects used their rules to correct just-initiated speech (speech → sound prediction → speech) than when they used their rules to initiate speech (sound prediction → speech).

LEARNING RULES: WHAT IS LEARNED AND HOW

These positive results have led us to ask a deeper question. Assuming that formal rules have something to do with the learner's progress, by what route do formal rules come to influence speech production?

Contrary to expectation, we have come to the conclusion that formally learned rules have little to do directly with spontaneous speech production. The salient word here is *directly*. We do, however, believe that there is a connection between formal pronunciation rules and speaking accuracy. The nature of this link has become clearer to us as we have tried different tactics semester after semester to get students to make more of their rule learning.

To identify the connection between a rule written on paper and a tacit rule capable of guiding the form of unpremeditated speech, we can trace the learner's movement through a series of stages which we believe are involved. These stages are represented in (4).

(4)	Stage 1		Stage 2		Stage 3		Stage 4
Paper Rule	→ Rule Learning	→	Predicting with Learned Rules	→	Producing with Learned Rules	→	Producing with Acquired Rules

To illustrate these stages, we will continue to use word-level rules. However, the stages could be illustrated just as well with phrase-rhythm rules or with intonation rules.

A simply stated rule on paper can be learned verbatim. For example, a stressed VC in the Left Syllable predicts a short vowel. In itself, this first stage—Rule Learning—is unimportant. But as a step in the larger process, this stage is essential.

With a rule in the head, the learner is no longer dependent on having the rule in hand.

Rules in the head seem to be retained longer when they are used again and again on actual words to make predictions. This is Stage 2. For example, having placed stress on the Left Syllable of *týranny* and *insánity*, learners use the VC rule (3.a. above) to determine that a Short I is required in *týranny*, despite the familiar word *tyrant*, and that a Short A is required in *insánity*, despite the familiar word *insane*.

The predictions made in Stage 2 can be done on paper and need not involve the mouth at all. For this reason, Stage 2 is also relatively meaningless as an end in itself. Unfortunately, some students get such a sense of accomplishment from assigning stress properly to novel words and predicting their vowel and consonant sounds that we must actively encourage learners to move beyond this stage. The test results of those who resist moving beyond Stage 2 are quite revealing. These students may make perfect scores on written tests, but on oral tests, their speech show few effects of their learning.

Stage 3 is different. In it, learners actually produce or articulate words according to the predictions they have generated by rule in Stage 2. Out of Stage 2 comes a set of guidelines for speech—specific predictions concerning how a word should sound. This is a model. It is not a model of articulation, because in Stage 2 nothing is spoken. But it does identify the correct sounds to be made and their sequence in a word. The model says that *tyranny* requires a stressed Short I, a Schwa and a Long E. If learners know how to make a Short I, a Schwa and a Long E as a result of their oral/aural practice, they should be able, in Stage 3, to follow the model to pronounce *tyranny* properly.

Every student we have had has been able to modify his or her speech to match a predicted model. For many, this self-initiated pronunciation improvement is the source of considerable satisfaction. They sense the independence the rules give them. However, this stage is not the end of the road. This is not Stage 4 where rules guide fluent speaking with ease.

To understand this last step, let us retrace the process and consider the kind of effort the learner contributes in order to pass from one stage to the next.

To get from a rule on paper to Stage 1—a rule in the head, the process entails *memorization*. The learner must put forth the effort to learn a formal statement. From Stage 1 to Stage 2, the process involves *application*. The learner must make the effort to use the rule to generate specific predictions for specific words. From Stage 2 to Stage 3, the transition requires *production*. The learner must go to the effort to articulate a word according to the predictions made. Unlike the preceding steps, speech output is being affected. However, although the rules affect premeditated speech, they do not control the learner's spontaneous speech. For that, the learner must move from Stage 3 to Stage 4, from explicit rule to tacit rule. To make this transition, what effort must the learner put forth? Our hypothesis is that the learner must engage in a process of *familiarization* with the pattern of English sounds.

This final step requires elaboration. Let us address two questions: What is a pattern of sounds? What is involved in familiarization?

A pattern of sounds for a word set is a particular arrangement or organization of stresses and sounds or sound categories. Each word set in the language has one or more characterizing sound patterns. For the set of final *-y* nouns, the principal pattern is given in (5).[4]

[4]Another pattern is ŭ···ə···ē, because of the rule which states that a stressed uC in the Left Syllable predicts a Long U, e.g. *mútiny, scrútiny*.

(5) $\acute{V}_s \cdots ə \cdots \bar{e}$

The pattern in (5) is a stress-vowel skeleton. It is a composite of the outputs of the four rules in (3)—a stressed Left Syllable, a short (V_s) Left vowel, a reduced Key vowel and a Long E terminal. The words of the final -y set conform to this skeleton. Their specific consonants and stressed vowels give it flesh. But no matter how a particular word dresses the skeleton, the underlying structure is never hidden as illustrated in (6), where the first vowel of the skeleton is made specific.

(6)	á···ə···ē	é···ə···ē	ó···ə···ē	í···ə···ē
	family	melody	comedy	ministry
	galaxy	remedy	policy	litany
	agony	felony	botany	trilogy
	cavalry	enemy	colony	mimicry

So, this is what we want learners to become familiar with: the pattern of sounds that describes a word set. In the end, it is not the rules per se that we want learners to use in speech but the pattern of sounds that the rules make. The stress-vowel skeleton is much more important than individual rules because, as a whole, it is a miniature version of the larger alternation of stress and vowel quality found in phrases. The skeleton captures not only changes in beat and tempo but also the concomitant changes in full and reduced vowels. So, when learners say words from this class, we want them to say the words, not as a sequence of discrete vowel and consonant segments—*fa·mi·ly*—but as a unit with its own cadence, a unit that can easily fit into and participate in the larger rhythm of the utterance, so crucial for comprehension.

When we say that learners must become familiar with the pattern, we mean that they must get used to hearing and saying the pattern in the words of the word set. We want them to become so accustomed to the sound of the pattern that when they see unfamiliar words, perhaps like those in (7), only the right pattern seems right when they say the words.

(7) syzygy heronry digamy

This growing familiarity is the development of what we refer to as a *feel* for the language or an intuition about what sounds right in English. It is what native speakers and some second-language learners acquire without any explicit learning of rules. When this familiarity progresses to the point that learners can base fast, subconscious judgments of correctness on it, we say that they have entered Stage 4.

We have said that learners get from Stage 3 to Stage 4 by becoming familiar with sound patterns, such as the one in (5). This hypothesis, however, leaves unanswered a number of important questions which deserve careful consideration. For example, what does the learner have to do to develop the necessary familiarity? Where do formal rules fit into the picture?

Our experience with learners seems to bear out our belief that the more the learner says aloud the pattern of sounds in words while focusing deliberately on its components, the more familiar the pattern of sounds becomes. Constant and conscious exposure to the sounds of a pattern helps learners internalize the pattern more quickly than occasional and superficial exposure.

Of course, learners must say the patterns properly. Wrongly uttered patterns defeat the ultimate aim of practice. This is where formal rules come in. Rules allow the learner to generate the correct pattern for a word, if the pattern is unfamiliar. Piece by piece, the learner can assemble the components of the stress-vowel skeleton

characteristic of a particular word group. Equally important, rules allow the learner to check the accuracy of a pattern just spoken in a word and alter it accordingly. That is, by using rules, the learner can examine the components of an attempted pronunciation to see whether its stress and sounds are right.

In short, our hypothesis about pattern acquisition is that the conscious use of predictions to guide production—Stage 3 activity—can lead ultimately to the subconscious use of predictions to guide production—Stage 4. Given enough prediction-to-production practice, learners can build up the required familiarity with patterns.

DEFINING THE TASK OF TEACHER AND LEARNER

If a quantity of rule-guided oral performance is necessary to familiarize the learner with English sound patterns, where does the classroom fit into the picture?

It has come as something of a shock to us pronunciation teachers to realize that we have little control over the important transition to Stage 4. Who determines whether or not a learner will ultimately make the transition? If tacit rules form, as shown by a demonstrated familiarity with sound patterns, it is mostly because of what the learner does—the amount of rule-guided production the learner chooses to do—not because of what we do directly. Where and when will the transition take place? The fact is, there is simply not enough time in class for students to do the amount of practice necessary to get them thoroughly acquainted with the sound patterns in all of the word groups we study. If the transition to Stage 4 takes place, it will likely happen outside of class on the student's own timetable.

Despite our inability to insure the outcome of our instruction, we should avoid two possible courses of action. On the one hand, we should not give up on pronunciation instruction with the hope that somehow, on their own, students will learn the phonological elements and the rules governing them. The students placed into our remedial pronunciation classes confirm that in most cases such learning is not likely to happen. On the other hand, we are convinced that we should not go back to teaching the elements—the sounds, stresses and intonation contours—without helping students gain a strong sense of how to use these elements in novel words, phrases and sentences.

The teacher's role in the rule-learning and rule-using part of the pronunciation course should, in our view, focus on the following. First, we can help our students understand what they must do to make real progress in English pronunciation. Second, we can help them use prediction as a guide for production and thereby improve their skill with the principal Stage 3 activity. Third, we can help them extend their Stage 3 skill beyond the classroom and beyond the semester. Each of these points can be further elaborated.

Understanding the prerequisites of progress. We cannot expect our students to understand what they must do in order to reach Stage 4 unless we tell them. In various ways, therefore, at the onset of the semester, we try to communicate what is involved in making long-term advances in pronunciation skill.

First, we acquaint students with the value of rules, mainly by using their own experiences. There are many situations where learned rules can help them. For instance, we ask: How many times have you mispronounced a word, not because you could not pronounce the right vowels and consonants, but because you did not know that the word required that particular vowel or that particular consonant? You

didn't know which sound to use, so you made a mistake. Or we ask: What do you do when you encounter a word you don't know how to pronounce? Look it up in a dictionary? Ask a friend? Make the best guess you can? Try to avoid the word? We point out that if students knew the prediction rules in these situations, they could rescue themselves.

Second, we demonstrate the common student error of stopping at Stage 2, making predictions on paper. We have found it necessary to stress that the sole purpose of learning and using rules is to guide pronunciation. We say this as dramatically as we can, with analogies. For example, we bring to class a set of rules, such as the rules for solving Rubic's Cube or another puzzle. We demonstrate the rules quickly with a performance by solving the cube or puzzle. Then we give the rules and puzzle to a student to perform with. Of course, the student's progress is painfully slow and laborious. After a minute or so, we make our point. Without practice with the rules again and again, no skillful performance can result and the rules are useless. We throw the rule page in the trashbasket.

Similarly, the learner's vowel, consonant and stress rules exist to improve speech. But improved speech—skillful oral performance—is not possible without a lot of oral practice with the rules. Without that practice, the rules and their predictions are of no value. We say to learners: Don't waste your semester going only part way toward the goal by merely learning rules and making predictions. Go all the way, by using the rules to guide your choice of the sounds you speak.

Third, we identify our emphasis in grading tests. We want our students to know that we will grade them more heavily on oral tests than on written tests. This is, after all, a pronunciation class. Rules are important and so are predictions, but most important are their accurate productions based on predictions. We often tell our students: We are not so concerned with what you know as with what you can do with what you know. Can you make your mouth behave better because of knowing the rules?

Fourth, we describe why a lot of oral practice is necessary. We tell students that they already use pronunciation rules when they speak, subconscious rules they have built up from many sources. A serious problem is that some of the rules in their speech-control center are giving wrong results, leading to mispronunciations. To improve their speaking accuracy, they need to replace the poor rules with good rules like the ones we teach in our course.

But students also need to be aware that it is a hard job to put new rules into their speech-control center. The old rules are stubborn. Students have spent years using the old rules, depending on them for decisions when speaking. The only way we know for learners to push out inefficient rules and install better ones is to use the new rules as much as they can to shape what they say. This is why a lot of oral practice is needed.

Finally, and perhaps most important for students to understand, we emphasize that their progress is up to them. We cannot make them improve. Their speech accuracy will improve only if they make it happen.

In these different ways, then, we try to make the students aware of what is required in order to make permanent advances in pronunciation abilities. The second major contribution our instruction can make is to teach them how to use predictions to guide their production—Stage 3 activity.

Making predictions to guide production. First, we instruct students to practice aloud Discovery Homework predictions. In every pencil-and-paper exercise, where

students place a stress mark or transcribe a predicted vowel or consonant, they see this instruction: *Read each word aloud.* It is so important that students take the time to pronounce words according to the model they have just generated that we emphasize this step from time to time during the semester.

Second, we lead learners to correct their own errors in the Oral Work. When a learner makes a mistake, the teacher never offers a correct rendition. Our procedure here is quite different from what we do in the articulatory/discrimination segment of the class. In the rule-oriented part, rather than correct, the teacher asks leading questions which help the learner identify the error and correct it without the teacher's model. For example, if a student reads, The desk is genuine mahogany (/mahōgăn̄ē/), the teacher will say, Let's look at the last word again. After writing the word on the board, the teacher asks, Where is the Key? The learner says, *an*. Where is the Left Syllable? The answer is, *og*. Where does the stress rule place the stress? On the Left Syllable. What is the quality of the Left vowel? Short O. The Key vowel? Schwa. Now, say the word again. The learner says the word properly and repeats the whole phrase.

From this procedure, learners not only discover the power of their rules to give them correct answers, but they also learn the set of relevant questions by which they can examine their own utterances for accuracy.

Third, we require students to use leading questions to monitor others. In three ways, learners use their rules to check the pronunciation of other class members. Least demanding is the general requirement that they listen as each student reads in class, check the pronunciation and be prepared to help the reader with answers to leading questions, if the reader gets stuck. More demanding are competitions. Subgroups in class earn points according to the accuracy of their reading after group members have evaluated it and suggested corrections. This activity raises the stakes on good monitoring. Most challenging of all, students are occasionally given the opportunity to take the role of the teacher. When one student reads the Oral Work, the student in the teacher's role must identify any errors and pose leading questions to guide the reader to correct his or her mistakes.

Finally, we send students to search their own reading materials for words from the target word set. They are asked to bring to class ten words that are unique to their own fields but which belong to the word class under study. We collect these words and use them in our review sessions before tests. Students find this exercise extremely interesting. More importantly, they begin to look at their reading materials in a new light, as an opportunity to practice making and using predictions.

In these different ways we are helping learners build Stage 3 skill. We are developing in them the strategy of asking leading questions in order to check and correct the oral accuracy of a pattern. All of these efforts are preparing the learner for the most formative activity of all, that of using Stage 3 skill on their own. The third contribution we can make to students is to help them carry their skills into their private lives where the transition to Stage 4 happens.

Promoting covert rehearsal. First, we make students aware of the potential of *covert rehearsal.* Covert rehearsal is the time we spend by ourselves preparing the content and form of utterances for future use. We think specifically about what we will say in this situation or that, to this person or that, on this topic or that. It is also a time for listening to oneself, for judging accuracy and fluency, for repeating, adjusting and trying again to make things sound better. Covert rehearsal may be a universal strategy of language learners and, for that matter, of native speakers of a

language. We have yet to find a learner who does not preplan utterances in private, who does not devise questions to ask or answers to give, who does not invent conversations and participate in them. All of our students admit that they self-monitor and self-correct to improve the sound of their speech.

The reason for shining the spotlight on covert rehearsal is this: Covert rehearsal and formal rules are made for each other. Formal rules have little place in active conversation. Conscious rule-use requires too much attention and takes too much time. In conversation, attention must be given to the message. And because the message moves on quickly, there is no time for analysis. But in covert rehearsal, there is time for the primary function of formal rules, namely, to help learners evaluate and improve spoken patterns. Is the stress of this word right? Let's check it against the rule. Are the vowel qualities correct? What do the rules say? By self-monitoring and oral self-correcting, learners increase their familiarity with English patterns of sound. The more learners use rules in covert rehearsal to guide their oral practice, the closer they will get to Stage 4.

Second, we must assure students that talking aloud to oneself is not only all right, it is also necessary. The ultimate pronunciation goal we have for our students is that they develop a deep familiarity with the sound of pronunciation patterns. To gain this familiarity, they must articulate the sound patterns again and again in covert rehearsal. Unfortunately, many students feel a culture-imposed reluctance to talk to themselves aloud, even in private. We must face this proscription squarely or else our admonitions to practice aloud will be ignored. It is therefore vitally important to bestow on this activity some positive countervalues. Values such as these are mentioned: Talking out loud to oneself is a characteristic of good language learners. It is a sign of concern for quality. Talking aloud to oneself is what actors do when they learn their lines. It is what public speakers do before facing an audience.

Third, we suggest other opportunities for covert oral rehearsal. Even though silent rehearsal can take place at any time the learner is not otherwise engaged—while walking along, waiting for an appointment, lying in bed at night, daydreaming in the library—oral rehearsal is not always appropriate. Therefore, we must help the learner recognize opportunities for oral practice. If we can show learners how to make oral rehearsal time part of their other activities, they will benefit. For example, when they are doing required reading for other classes, they will come across words they have not heard before. They should see this as a chance for oral rehearsal. They can pause a moment, try to pronounce the word aloud, check their production against their rules, then correct aloud. In this way, they add directly to their oral control of the sound patterns used in the lexicon of their field of study or research. Suggestions like these open up to learners occasions they might not otherwise think of as opportunities for oral practice.

In short, although the road to skillful speech is almost entirely in the hands of our students, we teachers can play an important part in improving the likelihood of their success. We can sensitize our students to the nature of their language learning task. We can train them to examine the correctness of their speech by means of predicted pronunciations. And we can actively encourage them to incorporate rule-use into their private, everyday self-monitoring activities.

MONITORING IN THE MONITOR MODEL

Krashen (1981) offers researchers a model of language learning that not only has intuitive appeal but also accommodates a diverse array of research findings. In

particular, it provides an interesting set of constructs with which to interpret the experiences of our research group. After sketching Krashen's model, we will look at our work from his point of view.

The central assumption of the Monitor Model is that there are two separate processes by which we develop an ability in a language, acquisition and learning. Acquisition is the means by which we subconsciously gained control of our first language; we picked it up in the context of social interaction. Adults, too, have the ability to acquire another language in this sense. Learning is the result of consciously manipulating language rules and receiving correction in the context of formal instruction. In this model, what we have *acquired* is available to initiate, or creatively construct, an utterance. What we have *learned* is available in the Monitor to modify already-initiated utterances, either before or after they are actually spoken.

Although support for the Monitor Model has come largely from morpheme-order and syntax studies (Krashen 1977), the model can shed light on what is happening in our pronunciation classes. Only two general points are discussed below. For more detail, see Dickerson, forthcoming a.

First, points of convergence. According to the model, explicit pronunciation rules of the sort we have discussed in this paper are housed in the Monitor and are distinct from the tacit rules of acquired competence. The learned rules in the Monitor do not originate utterances but function instead to correct the output of the acquired system when conditions allow.

Our experience and research bear out this dichotomy of rules and their difference of function. In the first place, our students can learn explicitly far more than they are able to demonstrate in unpremeditated performance. In the second place, we have found, in the study cited above, that learners' efforts to use rules to initiate speech only interfered with their fluency, while their efforts to use rules for correcting already-initiated utterances improved their fluency.

Our observations also support the claim that to use the Monitor at all, the speaker must be focusing on the form of the utterance and must have the time to bring to bear explicit rule information. Pronunciation rules, like formal grammar rules, have little place in natural conversational situations, because these prerequisites rarely co-occur there.

Second, a point of divergence. It is our impression that recent discussions of the Monitor Model have relegated the development of the Monitor (by rule learning) to such a minor role in second language teaching/learning that it is, in effect, being discouraged. Krashen (1981:107) clearly puts Monitor building in its place when he says, "While the research definitely gives acquisition the central role, it does not imply that learning should be rejected entirely." In our view, this near-rejection of Monitor building is an unfortunate, although perhaps necessary, swing of the pendulum. Our reason for this opinion is that, in the case of pronunciation rules, the Monitor seems to serve another, but largely unnoticed, function within the model, a function that may well be its most important contribution to the language acquisition process.

One claim arising from the Monitor Model is that effective second language acquisition requires a large quantity of intelligible input of the target language (1981:104-105). We agree completely. However, what we have discovered is that learners provide a great deal of their *own* input. As mentioned above, we have not yet found a single learner who does not rehearse target language utterances in private. In fact, personal observation and interviews point to the fact that many learners in our classes talk to themselves in the target language more than they talk to

anyone else in the target language. That is, their own output is one important source of their requisite input.

Another related claim is that the learners' optimal input is slightly above their level of competence at the moment (i + 1) (1981:102). When learners, in covert rehearsal, use formal rules to correct a trial utterance, the result is an utterance improved beyond what the learners could attain without the help of the rule. The utterance is at least at the level of (i + 1). This corrected output that they listen to and repeat is, in part, *optimal* input.

In short, little attention has been given to the role of covert rehearsal in increasing second language facility. Nevertheless, we have good reason to believe that the self-improvement potential of covert rehearsal—prime occasions for Monitor use—is especially great. For many of our students, who are already advanced in their language acquisition, the Monitor is in constant and abundant use in the common, but informal, activity of covert rehearsal. We attribute at least part of the increase in their pronunciation accuracy to this activity. We are not suggesting that learned rules somehow *leak* into the acquisition system; our research does not speak to that question. We are suggesting, however, that the output of a student's learning, in the form of self-corrected utterances, does affect the development of that student's acquisition system by supplying part of the needed optimal input of the target language.

The pedagogical implication of this output-to-input process is that we should teach our students formal rules in order to equip them for private self-monitoring. Then, during covert rehearsal, they can use their learned rules to contribute directly to the amount of optimal input they need to build their acquired rules. The work reported here can be interpreted as a classroom implementation of this idea.

CONCLUSION

Oral-aural practice with the sounds of English is important in pronunciation classes. Also important are formal rules. They have a role to play in the learner's interlanguage development. **The role of formal rules is to provide self-evaluation for purposes of self-correction.** This is the process—carried out primarily during covert rehearsal—in which learners judge their own utterances against rule-generated predictions, then self-correct in order to get intimately familiar with the sound patterns of oral English. Although we teachers are not directly involved in this process, it may turn out that one of the greatest contributions we can make to our students' language acquisition success will be to teach them overtly in class how to teach themselves covertly out of class.

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